



Cel-Fi QUATRA 2000

3G/4G/LTE In-building Cellular Solution

INTRODUCTION

Spotty cellular coverage, poor voice quality, dropped calls, and dead zones continue to plague employees and visitors in middlerise buildings. Cel-Fi QUATRA 2000 is a scalable in-building cellular solution that is both a costefficient and easy-to-deploy solution, delivering high-quality signal in venues up to 200,000 square feet. It is a hybrid solution that combines the best of active DAS and Smart Booster technologies.

The Cel-Fi QUATRA 2000 operates by capturing the signal from the outside macro networks, boosting them, and relaying their signals indoor from the coverage units. Cel-Fi QUATRA 2000 is carrier approved and guaranteed network safe.

Unlike older analog boosters and passive DAS technology, Cel-Fi QUATRA 2000 delivers a cellular signal that is up to 1000x stronger, utilising CAT 5e cabling for RF and Power over Ethernet, with no signal attenuation right to the perimeter of the building. QUATRA can be installed in just days (compared to months typical of other solutions), and at a price point that meets the middlerise budget.

FEATURES



Built for Installers with Signal Quality Maximised by AntennaBoost



Best Signal by 1000x



Scalable for Middlerise Buildings



Dual or Multi-Carrier Solutions Available



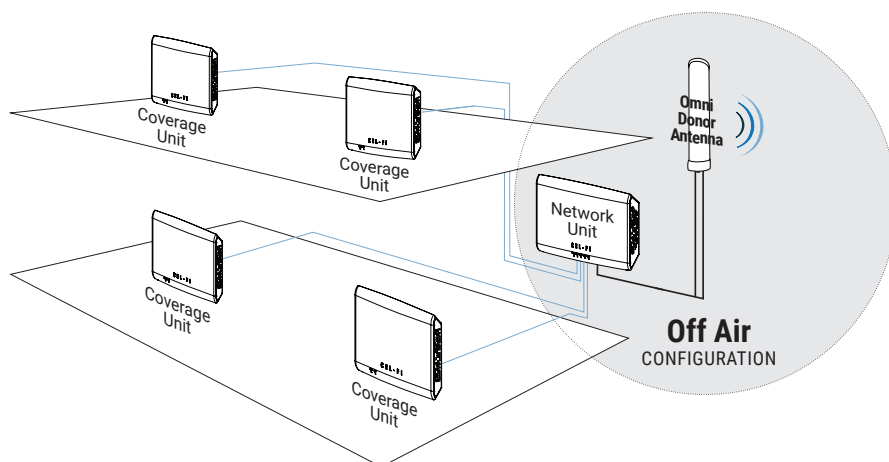
Remote Monitoring & Management via Cel-Fi WAVE Platform



Lowest Costs per ft2



CONFIGURATION

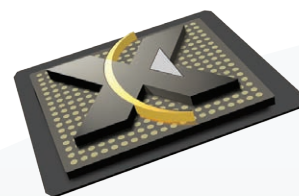


Off Air Configuration

Cel-Fi QUATRA 2000 can be installed off-air, using an omni donor antenna to provide high-quality in-building wireless connectivity. Cel-Fi QUATRA can be deployed by installers or IT personnel with Cat5e skills (no RF engineering skills needed).

Cel-Fi QUATRA is a scalable solution that utilises one or multiple NUs, depending on the environment & size of the space, with up to 4 distributed CUs connected to each NU.

THE BUILDING BLOCKS



Cel-Fi WAVE Portal

- Cel-Fi device & asset management
- Data modeling and reporting
- Mobile and computer applications
- Globally trusted carrier grade security
- Users can access the Cel-Fi WAVE portal through the dashboard interface, or integrate it via APIs.

Network Safe

Self-organising edge intelligence ensures that Cel-Fi QUATRA does not interfere with other indoor wireless products such as Wi-Fi routers, Small Cells, and Distributed Antenna Systems (DAS). High speed Automatic Gain Control ensures that Cel-Fi QUATRA is unconditionally network safe, and enables more simultaneous calls and higher data speeds.

IntelliBoost™ Chipset

The Nextivity IntelliBoost™ baseband processor is the first six-core processor designed specifically to optimise the indoor transmission and reception of 3G and 4G/LTE wireless signals. With advanced filtering, equalisation and echo-cancellation techniques, Nextivity has developed an architecture which delivers unprecedented in-building data rates and pervasive 3G and 4G/LTE connectivity. The IntelliBoost processor ensures that Cel-Fi products never negatively impact the macro network while providing maximum coverage.

SOLUTION COMPONENTS



Cel-Fi QUATRA Range Extender (QRE)

Cel-Fi QUATRA Range Extender is a Power over Ethernet (PoE) device that extends the maximum distance between the NU and the CU.

- Allows NU-to-CU cable lengths of up to 650 ft (200 m)
- Power over Ethernet (no separate power supply or PoE injector needed)



Cel-Fi Indoor Omni Antenna

The Indoor Omni Antenna receives and transmits signal in a 360° pattern and are compatible with the 698 – 2700 MHz frequency ranges that include 3G and 4G signals. They come with an SMA Male Connector.

- 3G/4G/LTE wideband cellular antenna
- SMA Male connector
- Omni-directional



Cel-Fi Wideband Omni Donor Antenna

The Cel-Fi Wideband Omni Donor Antenna is the ideal donor signal source for the QUATRA 2000. It has N-type Female connectors. The Cel-Fi Omni Donor Antenna is the only authorised indoor/outdoor antenna for Cel-Fi QUATRA 2000 Off-Air solutions only.

- Wideband omni antenna
- Dual feeds (MIMO)
- Includes pole mounting options
- Designed for QUATRA 2000 off-air installation



SPECIFICATIONS

Power (Network Unit Only)

- 54 VDC @ 2.22 Amp via external supply (51.3 to 56.7 VDC tolerance)
- External supply: 100 to 240 VAC, 47 – 63Hz
- Power consumption: Less than 120W max
- Network Unit provides power to Coverage Units over Cat5e (PoE)

Radio Performance¹

- Total boost all-channel bandwidth 75 MHz
- DL Max. NU in-band donor level -40dBm
- DL Max. NU survival donor level 30dBm
- UL Max. CU donor level -20dBm
- Max. UL power 24dBm EIRP bands 4, 25
- Max. UL power 20dBm EIRP bands 5, 12, 13,
- Max. DL power 10dBm per 5 MHz EIRP all bands
- LTE 5/10/15/20 MHz and WCDMA 3.84/5MHz bandwidths

Connections

- 4x CU RJ45 Proprietary Gigabit link
- 100m max CU cable length Cat5e
- 200m max CU cable length with Cel-Fi QUATRA Range Extender (Cat5e or Cat6)
- PoE IEEE 802.3at
- RJ45 LAN management port (10/100 Fast Ethernet)
- RJ45 LAN management output port (10/100 Fast Ethernet)
- 2x External RF Input (QMA Female 50 ohm)

Installation

- Mounting hardware included
- NU may be wall mounted
- CUs may be wall or ceiling mounted
- 1 NU supports 1 to 4 CUs
- iBwave VEX files available

Physical Specifications

- Network Unit:
Dimensions: 250 x 188 x 55 mm,
Weight: 1.2 kg
- Coverage Unit:
Dimensions: 188 x 188 x 50 mm,
Weight: 0.83 kg

Environmental

- Operating temperature: 0° to 40°C
- Storage temperature: -25° to 60°C
- Convection Cooling
- Relative humidity: 0% to 95%, noncondensing
- RoHS II 2011/65/EU
- IP20

Compliance²

- 3GPP TS 25.143 Rel.10
- 3GPP TS 36.143 Rel.10
- FCC Part 15, 20, 22, 24, 27
- ISED Canada
- UL 62368-1/CSA C27.2
- Bluetooth BQB

System Management Software

- Cel-Fi WAVE cloud portal
- Cel-Fi WAVE Remote Management:
 - Status (list and map)
 - Settings
 - Commissioning
 - Reporting
 - Diagnostics
 - Alarms & Notifications
 - Software Updates

PRODUCT VARIANTS

Product Name	Model Number	Frequency (MHz)	Bands Supported	MIMO Support	Crossover Support
QUATRA 2000	Q34-4/5/12/13/25	1700/850/700a/700c/1900	4, 9, 12, 13, 25	NA	NA

¹ - check product version for specific band support

² - check individual product version for specific regional compliance

Why Rising Connection is using equipment designed and built by Nextivity?

- Designed and built for the most varied conditions in the world including Australian environment.
- Worldwide proven and respected Industry Experience including in the Australian Telecommunications Industry.
- Expertise support and customer focused staff.
- Up to date with technology and bringing to market the best quality technology available for Reliable Commercial use

This demonstrates to Rising Connection that you will have the Quality, Reliability and Product Support.